Pavel NovÃ¡k

List of Publications by Year
in descending order

104 papers	1,406 citations	361296 20 h-index	434063 31 g-index
105 all docs	105 docs citations	105 times ranked	1220 citing authors

#	Article	IF	Citations
1	The preferential formation of Ni2Al3, Fe2Al5, and Ti2Al5 phases in aluminide systems. Materials Chemistry and Physics, 2022, 280, 125859.	2.0	1
2	Possibilities of a Direct Synthesis of Aluminum Alloys with Elements from Deep-Sea Nodules. Materials, 2022, 15, 4467.	1.3	2
3	Structure and Properties of Alloys Obtained by Aluminothermic Reduction of Deep-Sea Nodules. Materials, 2021, 14, 561.	1.3	11
4	Structure and Properties of Cast Ti-Al-Si Alloys. Materials, 2021, 14, 813.	1.3	3
5	Solutions of Critical Raw Materials Issues Regarding Iron-Based Alloys. Materials, 2021, 14, 899.	1.3	5
6	Development of TiAlâ€"Si Alloysâ€"A Review. Materials, 2021, 14, 1030.	1.3	18
7	Aluminum Alloys with the Addition of Reduced Deep-Sea Nodules. Metals, 2021, 11, 421.	1.0	6
8	Novel High-Entropy Aluminide-Silicide Alloy. Materials, 2021, 14, 3541.	1.3	1
9	Effect of alloying elements on the properties of Ti-Al-Si alloys prepared by powder metallurgy. Journal of Alloys and Compounds, 2021, 868, 159251.	2.8	11
10	Corrosion Properties of Mn-Based Alloys Obtained by Aluminothermic Reduction of Deep-Sea Nodules. Materials, 2021, 14, 5211.	1.3	5
11	A comprehensive description of reactions between nickel and aluminum powders during reactive sintering. Materials Chemistry and Physics, 2021, 271, 124941.	2.0	6
12	Microstructure, Mechanical Properties, and Thermal Stability of Carbon-Free High Speed Tool Steel Strengthened by Intermetallics Compared to Vanadis 60 Steel Strengthened by Carbides. Metals, 2021, 11, 1901.	1.0	7
13	The effect of microstructure on hydrogen permeability of high strength steels. Materials and Corrosion - Werkstoffe Und Korrosion, 2020, 71, 909-917.	0.8	26
14	Thermal analysis of FeAl intermetallic compound sintered at heating rate of 300ÂÂ°C/min. Journal of Alloys and Compounds, 2020, 819, 152978.	2.8	7
15	Microstructural, Mechanical, Corrosion and Cytotoxicity Characterization of Porous Ti-Si Alloys with Pore-Forming Agent. Materials, 2020, 13, 5607.	1.3	4
16	The Effect of Simultaneous Si and Ti/Mo Alloying on High-Temperature Strength of Fe3Al-Based Iron Aluminides. Molecules, 2020, 25, 4268.	1.7	9
17	Effect of Si Addition on Martensitic Transformation and Microstructure of NiTiSi Shape Memory Alloys. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2020, 51, 4434-4438.	1.1	5
18	Metallographic Determination of Strain Distribution in Cold Extruded Aluminum Gear-Like Element. Metals, 2020, 10, 589.	1.0	1

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19	The Critical Raw Materials in Cutting Tools for Machining Applications: A Review. Materials, 2020, 13, 1377.	1.3	89
20	Effect of Nickel and Titanium on Properties of Fe-Al-Si Alloy Prepared by Mechanical Alloying and Spark Plasma Sintering. Materials, 2020, 13, 800.	1.3	5
21	Advanced Powder Metallurgy Technologies. Materials, 2020, 13, 1742.	1.3	12
22	Formation of Phases in Reactively Sintered TiAl3 Alloy. Molecules, 2020, 25, 1912.	1.7	11
23	On the Structural and Chemical Homogeneity of Spark Plasma Sintered Tungsten. Metals, 2019, 9, 879.	1.0	8
24	Mechanism of the Intermediary Phase Formation in Ti-20 wt. % Al Mixture during Pressureless Reactive Sintering. Materials, 2019, 12, 2171.	1.3	6
25	On the Formation of AlNiCo Nano-Quasicrystalline Phase during Mechanical Alloying through Electroless Ni-P Plating of Starting Particles. Materials, 2019, 12, 2294.	1.3	2
26	Effect of Initial Powders on Properties of FeAlSi Intermetallics. Materials, 2019, 12, 2846.	1.3	2
27	Properties Comparison of Ti-Al-Si Alloys Produced by Various Metallurgy Methods. Materials, 2019, 12, 3084.	1.3	17
28	Ternary Fe-Al-Si Alloys Prepared by Mechanical Alloying and Spark Plasma Sintering. Microscopy and Microanalysis, 2019, 25, 2618-2619.	0.2	1
29	Structure and Properties of Feâ€“Alâ€“Si Alloy Prepared by Mechanical Alloying. Materials, 2019, 12, 2463.	1.3	16
30	Oxidation Behavior of Feâ€“Al, Feâ€“Si and Feâ€“Alâ€“Si Intermetallics. Materials, 2019, 12, 1748.	1.3	24
31	Application of SPS consolidation and its influence on the properties of the FeAl20Si20 alloys prepared by mechanical alloying. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 761, 138020.	2.6	5
32	Kinetic and thermodynamic description of intermediary phases formation in Ti-Al system during reactive sintering. Materials Chemistry and Physics, 2019, 230, 122-130.	2.0	22
33	Synthesis of Intermetallics in Fe-Al-Si System by Mechanical Alloying. Metals, 2019, 9, 20.	1.0	26
34	Preparation of TiAl15Si15 intermetallic alloy by mechanical alloying and the spark plasma sintering method. Powder Metallurgy, 2019, 62, 54-60.	0.9	14
35	Identification of Carbides in Tool Steel by Selective Etching. Defect and Diffusion Forum, 2019, 395, 55-63.	0.4	4
36	Critical Assessment of Techniques for the Description of the Phase Composition of Advanced High-Strength Steels. Materials, 2019, 12, 4033.	1.3	4

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37	Rapidly Solidified Aluminium Alloy Composite with Nickel Prepared by Powder Metallurgy: Microstructure and Self-Healing Behaviour. Materials, 2019, 12, 4193.	1.3	3
38	Influence of Heat Treatment on Microstructure and Properties of NiTi46 Alloy Consolidated by Spark Plasma Sintering. Materials, 2019, 12, 4075.	1.3	14
39	Mechanical properties of FeAlSi powders prepared by mechanical alloying from different initial feedstock materials. Materiaux Et Techniques, 2019, 107, 207.	0.3	3
40	Intermetallics as innovative CRM-free materials. IOP Conference Series: Materials Science and Engineering, 2018, 329, 012013.	0.3	4
41	Removal of copper and nickel from water using nanocomposite of magnetic hydroxyapatite nanorods. Journal of Magnetism and Magnetic Materials, 2018, 456, 451-460.	1.0	111
42	Cavitation-Dispersion Method for Copper Cementation from Wastewater by Iron Powder. Metals, 2018, 8, 920.	1.0	17
43	Structural characterization of semi-heusler/light metal composites prepared by spark plasma sintering. Scientific Reports, 2018, 8, 11133.	1.6	3
44	The Influence of Milling and Spark Plasma Sintering on the Microstructure and Properties of the Al7075 Alloy. Materials, 2018, 11, 547.	1.3	8
45	Reactive Sintering Mechanism and Phase Formation in Ni-Ti-Al Powder Mixture During Heating. Materials, 2018, 11, 689.	1.3	6
46	PREPARATION OF TiAl15Si15 ALLOY BY HIGH PRESSURE SPARK PLASMA SINTERING. Acta Metallurgica Slovaca, 2018, 24, 174-180.	0.3	2
47	MICROSTRUCTURE AND THERMAL STABILITY OF Al-Fe-X ALLOYS. Acta Metallurgica Slovaca, 2018, 24, 223-228.	0.3	3
48	The Effect of Production Process on Properties of FeAl20Si20. Manufacturing Technology, 2018, 18, 295-298.	0.2	5
49	PHASE FORMATION IN NiTiAl10 POWDER MIXTURE DURING HEATING TO 1100 Â°C. Acta Metallurgica Slovaca, 2018, 24, 181-186.	0.3	0
50	Fabrication of Ni-Ti Alloy by Self-Propagating High-Temperature Synthesis and Spark Plasma Sintering Technique. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2017, 48, 772-778.	1.0	15
51	Structure determination of a new phase Ni 8 Ti 5 by electron diffraction tomography. Intermetallics, 2017, 85, 110-116.	1.8	7
52	Titania sol-gel coatings containing silver on newly developed TiSi alloys and their antibacterial effect. Materials Science and Engineering C, 2017, 76, 25-30.	3.8	13
53	Investigation of the Effect of Magnesium on the Microstructure and Mechanical Properties of NiTi Shape Memory Alloy Prepared by Self-Propagating High-Temperature Synthesis. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 3559-3569.	1.1	16
54	Innovative Technology for Preparation of Seamless Nitinol Tubes Using SHS Without Forming. Metallurgical and Materials Transactions A: Physical Metallurgy and Materials Science, 2017, 48, 1524-1527.	1.1	3

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55	High-Pressure Spark Plasma Sintering (HP SPS): A Promising and Reliable Method for Preparing Tiâ€“Alâ€“Si Alloys. Materials, 2017, 10, 465.	1.3	27
56	Nanocrystalline Al7075 + 1 wt % Zr Alloy Prepared Using Mechanical Milling and Spark Plasma Sintering. Materials, 2017, 10, 1105.	1.3	5
57	Structure and Mechanical Properties of Al-Cu-Fe-X Alloys with Excellent Thermal Stability. Materials, 2017, 10, 1269.	1.3	23
58	Solutions for Critical Raw Materials under Extreme Conditions: A Review. Materials, 2017, 10, 285.	1.3	52
59	PROPERTIES OF Ni-Ti-X SHAPE MEMORY ALLOYS PRODUCED BY ARC RE-MELTING. Acta Metallurgica Slovaca, 2017, 23, 141-146.	0.3	1
60	Powder-metallurgy preparation of NiTi shape-memory alloy using mechanical alloying and spark-plasma sintering. Materiali in Tehnologije, 2017, 51, 141-144.	0.3	9
61	The Optimization of Sintering Conditions for the Preparation of Ti-Al-Si Alloys. Manufacturing Technology, 2017, 17, 483-488.	0.2	6
62	Finding the energy source for self-propagating high-temperature synthesis production of NiTi shape memory alloy. Materials Chemistry and Physics, 2016, 181, 295-300.	2.0	13
63	Microstructure and mechanical properties of Alâ€“Siâ€“Feâ€“X alloys. Materials and Design, 2016, 107, 491-502.	3.3	21
64	Effect of Particle Size of Titanium and Nickel on the Synthesis of NiTi by TE-SHS. Metallurgical and Materials Transactions B: Process Metallurgy and Materials Processing Science, 2016, 47, 932-938.	1.0	18
65	NiAl intermetallic prepared with reactive sintering and subsequent powder-metallurgical plasma-sintering compaction. Materiali in Tehnologije, 2016, 50, 447-450.	0.3	5
66	Porous magnesium alloys prepared by powder metallurgy. Materiali in Tehnologije, 2016, 50, 917-922.	0.3	9
67	Preparation of Ti-Al-Si Alloys by Powder Metallurgy. Manufacturing Technology, 2016, 16, 1274-1278.	0.2	11
68	Using of Microscopy in Optimization of the Ti-Al-Si Alloys Preparation by Powder Metallurgy. Manufacturing Technology, 2016, 16, 946-949.	0.2	7
69	Formation of Niâ€“Ti intermetallics during reactive sintering at 500â€“650ÂÂ°C. Materials Chemistry and Physics, 2015, 155, 113-121.	2.0	41
70	Ni-Ti Alloys Produced by Powder Metallurgy. Manufacturing Technology, 2015, 15, 689-694.	0.2	14
71	Intermetallics - Synthesis, Production, Properties. Manufacturing Technology, 2015, 15, 1024-1028.	0.2	8
72	Powder metallurgy preparation of Alâ€“Cuâ€“Fe quasicrystals using mechanical alloying and Spark Plasma Sintering. Intermetallics, 2014, 52, 131-137.	1.8	27

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73	Structure and magnetic properties of nickel nanoparticles prepared by selective leaching. Materials Letters, 2014, 137, 221-224.	1.3	13
74	On the formation of intermetallics in Feâ€“Al system â€“ An in situ XRD study. Intermetallics, 2013, 32, 127-136.	1.8	75
75	Selective aluminum dissolution as a means to observe the microstructure of nanocrystalline intermetallic phases from Alâ€“Feâ€“Crâ€“Tiâ€“Ce rapidly solidified alloy. Micron, 2013, 45, 55-58.	1.1	8
76	Effect of SHS conditions on microstructure of NiTi shape memory alloy. Intermetallics, 2013, 42, 85-91.	1.8	52
77	Structure and properties of Tiâ€“Alâ€“Si-X alloys produced by SHS method. Intermetallics, 2013, 39, 11-19.	1.8	21
78	EFFECT OF ALLOYING ELEMENTS ON PROPERTIES OF PM Ti-Al-Si ALLOYS. Acta Metallurgica Slovaca, 2013, 19, 240-246.	0.3	3
79	Microstructure characterization of rapidly solidified Alâ€“Feâ€“Crâ€“Ce alloy by positron annihilation spectroscopy. Journal of Alloys and Compounds, 2011, 509, 3211-3218.	2.8	22
80	Oxidation resistance of SHS Feâ€“Alâ€“Si alloys at 800ÂÂ°C in air. Intermetallics, 2011, 19, 1306-1312.	1.8	45
81	Structure and mechanical properties of an AlCr6Fe2Ti1 alloy produced by rapid solidification powder metallurgy method. International Journal of Materials Research, 2010, 101, 307-309.	0.1	5
82	Precipitation in the Fe-38Âat.% Al-1Âat.% C alloy. Intermetallics, 2010, 18, 1327-1331.	1.8	7
83	Effect of reactive sintering conditions on microstructure of Feâ€“Alâ€“Si alloys. Journal of Alloys and Compounds, 2010, 493, 81-86.	2.8	25
84	Intermediary phases formation in Feâ€“Alâ€“Si alloys during reactive sintering. Journal of Alloys and Compounds, 2010, 497, 90-94.	2.8	32
85	High-temperature behaviour of Tiâ€“Alâ€“Si alloys produced by reactive sintering. Journal of Alloys and Compounds, 2010, 504, 320-324.	2.8	20
86	Mechanism and kinetics of the intermediary phase formation in Tiâ€“Al and Tiâ€“Alâ€“Si systems during reactive sintering. International Journal of Materials Research, 2009, 100, 353-355.	0.1	13
87	Preparation of Tiâ€“Alâ€“Si alloys by reactive sintering. Journal of Alloys and Compounds, 2009, 470, 123-126.	2.8	43
88	Structure and Properties of Magnesium-Based Hydrogen Storage Alloys. Materials Science Forum, 2008, 567-568, 217-220.	0.3	3
89	Mechanism and Kinetics of Plasma Nitriding of the Nb-Alloyed PM Tool Steel. Defect and Diffusion Forum, 2007, 263, 87-92.	0.4	5
90	Kinetic and Thermodynamic Aspects of High-Temperature Oxidation of Selected Ti-Based Alloys. Defect and Diffusion Forum, 2007, 263, 123-128.	0.4	3

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91	Wear and corrosion resistance of a plasma-nitrided PM tool steel alloyed with niobium. Surface and Coatings Technology, 2006, 200, 5229-5236.	2.2	36
92	Duplex surface treatment of the Nb-alloyed PM tool steel. Surface and Coatings Technology, 2006, 201, 3342-3349.	2.2	13
93	Pulsed-plasma nitriding of a niobiumâ€“alloyed PM tool steel. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 393, 286-293.	2.6	5
94	Influence of Thermal Treatment on Microstructure and Hardness of Niobium Alloyed PMâ€Tool Steel. Instrumentation Science and Technology, 2004, 32, 207-219.	0.9	2
95	Electrochemical Hydriding of Mg-Based Alloys. Defect and Diffusion Forum, 0, 312-315, 882-887.	0.4	0
96	Structure of Rapidly Solidified Al-Fe-Cr-Ce Alloy. Key Engineering Materials, 0, 465, 199-202.	0.4	3
97	Effect of Alloying Elements on Microstructure and Properties of Fe-Al and Fe-Al-Si Alloys Produced by Reactive Sintering. Key Engineering Materials, 0, 465, 407-410.	0.4	7
98	Microstructure and Mechanical Properties of Rapidly Solidified Al-Fe-X Alloys. Key Engineering Materials, 0, 592-593, 639-642.	0.4	4
99	Microstructure Evolution of Fe-Al-Si and Ti-Al-Si Alloys during High-Temperature Oxidation. Materials Science Forum, 0, 782, 353-358.	0.3	7
100	Detection of pH Increase at the Surface of Cathodically Polarized Metal by Means of Amphoteric Metals Activation. Materials Science Forum, 0, 844, 55-58.	0.3	0
101	Effect of Alloying Elements on the Reactive Sintering Behaviour of NiTi Alloy. Materials Science Forum, 0, 891, 447-451.	0.3	8
102	FRACTURE BEHAVIOR OF FeAlSi INTERMETALLICS. Acta Polytechnica CTU Proceedings, 0, 27, 6-12.	0.3	0
103	Fe-Al-Si Alloys for Applications in Internal Combustion Engines. Defect and Diffusion Forum, 0, 403, 57-65.	0.4	0
104	Sintering Problems during Preparation of Ti-Al-Si Alloys. Defect and Diffusion Forum, 0, 403, 37-45.	0.4	0